AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the application:

LISTING OF CLAIMS:

1. (currently amended): An apparatus for deciding a coding mode in an image coding, the apparatus comprising:

a motion estimation unit which detects an optimal sum of absolute differences (SAD) for a current motion estimated block when a motion is estimated by using a current frame data and a previous frame data, wherein the optimal SAD is the smallest SAD among SADs detected by a motion estimated block;

a system control unit which outputs a predetermined threshold related to the optimal sum of absolute differences; and

a comparator which compares the optimal ~~sum of absolute differences~~ SAD output from the motion estimation unit with the predetermined threshold output from the system control unit and outputs information indicating the coding mode for the current motion estimated block.

2. (currently amended): The apparatus of claim 1, wherein the information indicating the coding mode for the current motion estimated block is expressed by ~~using a~~ one bit data.

3. (currently amended): An apparatus for deciding and managing a coding mode in an image coding, the apparatus comprising:

a motion estimation unit which detects an optimal sum of absolute differences (SAD) for

each of a plurality of motion estimated blocks when a motion is estimated by using a current

frame data and a previous frame data, wherein the optimal SAD is the smallest SAD among

SADs detected by a motion estimated block;

a comparator which compares the optimal ~~sum of absolute differences~~ SAD output from

the motion estimation unit with a predetermined threshold and outputs information indicating the

coding mode for a current motion estimated block;

a memory which stores the information indicating the coding mode for the current motion

estimated block output from the comparator; and

a system control unit which provides the comparator with the predetermined threshold

and controls a coding operation for the current motion estimated block with reference to the

information indicating the coding mode stored in the memory.

4. (currently amended): The apparatus of claim 3, wherein the information indicating the

coding mode for each of the plurality of motion estimated blocks is expressed by one bits data

which can be read for a frame by the system control unit.

5. (currently amended): The apparatus of claim 3, wherein one bit data of the

information indicating the coding mode stored in the memory is assigned to each motion

estimated block.

6. (original): The apparatus of claim 3, wherein the information indicating the coding

mode determines whether the coding mode of each motion estimated block is an intra coding

mode or an inter coding mode.

7. (currently amended): An apparatus for deciding and managing a coding mode in an

image coding, the apparatus comprising:

a motion estimation unit which detects an optimal sum of absolute differences (SAD) for

each of a plurality of motion estimated blocks when a motion is estimated by using a current

frame data and a previous frame data, wherein the optimal SAD is the smallest SAD among

SADs detected by a motion estimated block;

a comparator which compares the optimal ~~sum of absolute differences~~ SAD output from

the motion estimation unit with a predetermined threshold and outputs information indicating the

coding mode for a current motion estimated block; and

a memory which stores the information indicating the coding mode output from the

comparator.

8. (original): The apparatus of claim 7, wherein the predetermined threshold is set when

a motion estimation is initialized.

9. (original): The apparatus of claim 8, wherein the predetermined threshold is updated

by a frame by the system control unit.

10. (original): The apparatus of claim 8, wherein the predetermined threshold is updated by the system control unit when a bit rate of an image is changed.

11. (currently amended): A method of deciding and managing a coding mode in an image coding, the method comprising:

detecting an optimal sum of absolute differences (SAD) for each of a plurality of motion estimated blocks when a motion is estimated by using a current frame data and a previous frame data, wherein the optimal SAD is the smallest SAD among SADs detected by a motion estimated block; and

storing a comparison result of the optimal sum of absolute differences SAD and a predetermined threshold as coding mode information for a current motion estimated block.

12. (original): The method of claim 11, wherein the method further comprises coding the current motion estimated block with reference to the coding mode information.

13. (original): The method of claim 11, wherein the coding mode information is used to decide an intra coding mode or an inter coding mode when a coding of the current motion estimated block is performed.

14. (currently amended): The method of claim 11, wherein the coding mode information

is expressed by ~~using a~~ one bit <u>data</u>.

15. (original): The method of claim 12, wherein the coding mode information stored is used to decide an intra coding mode or an inter coding mode when a coding of the current motion estimated block is performed.

16. (currently amended): The method of claim 12, wherein the coding mode information is expressed by using ~~a~~ <u>one</u> bit <u>data</u>.

17. (original): The method of claim 12, wherein the current motion estimated block is coded with reference to the coding mode information read for a current frame.